DEPARTMENT OF TRADE AND COMMERCE

STANDARDS BRANCH

E-33

CANADA

OTTAWA May 4 1966.

NOTICE OF APPROVAL

FOR

LEEDS & NORTHRUP TYPE "M" MODEL "S" SINGLE PEN STRIP CHART POTENTIOMETER RECORDERS

Apparatus

*Millivolt Input	0-10 to 0-1000 millivolts
Record	Single Pen continuous line
Standardization	Continuous automatic (Zener diode)
Chart and Scale	9-7/8 inches calibrated width
Pen Speed	1 to 5 seconds for full scale travel
Chart Speed	1 to 10 inches per hour
Approved amplifiers	Tube type 101040 standard amplifier Tube type 101042 fail safe upscale at downscale Transistor type 101108
Maximum External Resistance	2000 ohms
Power Supply	120 volts 60 cycles

* The Kilowatts, Megawatts or other power functions which the millivolts represent shall be shown on the nameplate, scale and range card nameplate.

Type Designation: Made up of the following groups of numbers, all of which are described and covered by this approval.

example	500	-	985	-	041	-	0240	-	6	-	002	-	036
	(a)		(b)		(c)		(d)		(e)		(f)		(g)

(a) 500 stands for speedomax "M" strip chart recorder with range card

(b) 985 signifies a thermal converter application using a Zener diode regulated power supply delivering to the measuring circuit.

(c) Control Features:

041	2 S.P.D.T. switches operated by a front setter
051	3 S.P.D.T. switches operated by a front setter
081	1 S.P.D.T. switch independently set
082	2 S.P.D.T. switches independently set
083	3 S.P.D.T. switches independently set
*075	Signifies one retransmitting slidewire with power supply in which case the output millivolts will be indicated

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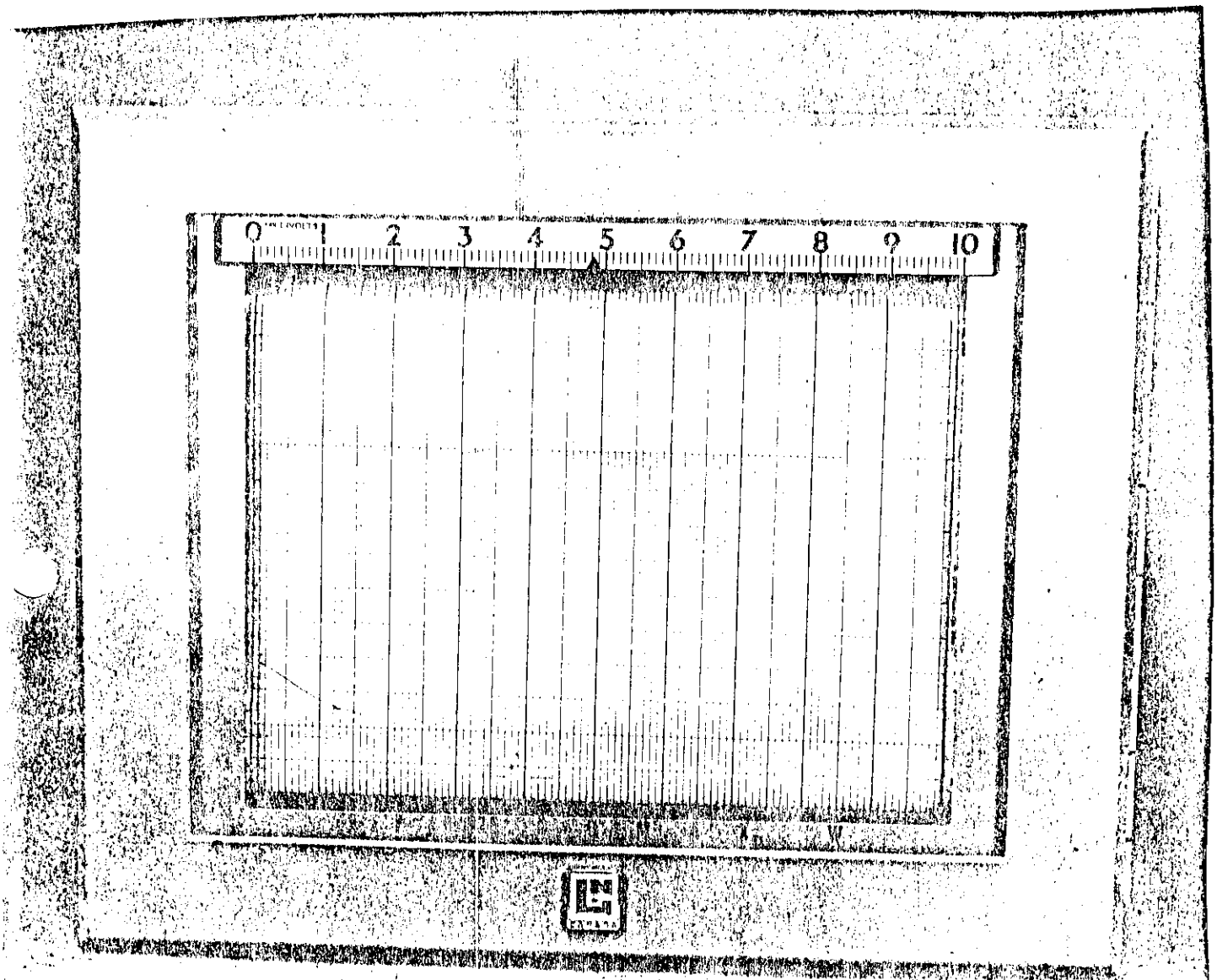
LEEDS & NORTHRUP TYPE "W" MODEL "C" SINGLE PEN STRIP CHART
POTENTIOMETER RECORDERS



on an auxiliary nameplate 032.

(d) Input Ranges:

0133	0-5 mv. scale graduated 0-100
0044	0-10 mv. scale graduated 0-10 (100 div.)
0127	0-25 mv. scale graduated 0-100 (200 div.)
0045	0-50 mv. scale graduated 0-50 (100 div.)
0240	0-100 mv. scale graduated 0-100 (100 div.)
0999	Signifies any millivolt input from 10 to 1000 millivolts The scale used will be a special other than listed above and the primary units such as KW., MW., MVAR will be marked on the scale and on the range card nameplate.

(e) Power Supply: 6 denotes 120 volt 60 cycles power to instrument.

(f) Chart Speeds:

001	designates 1 inch per hour chart speed
002	designates 2 inches per hour chart speed
003	designates 3 inches per hour chart speed
004	designates 4 inches per hour chart speed
006	designates 6 inches per hour chart speed
010	designates 10 inches per hour chart speed

(g) Optional Features:

006	Canadian Standards Association approval
*036	Door lock for use by the utility to prevent unauthorized access.
01	Input failsafe upscale
02	Input failsafe downscale, same as above, however direction of drive is reversed.
03	Amplifier failsafe upscale
04	Amplifier failsafe downscale
023	Transistor amplifier (101108) in place of standard type
027	Offscale limiting at low end of scale. Cam operated switch at low end to provide reduced torque to the balancing motor.
*032	Legend plate on the door
037	Signal light to indicate power or fuse failure
038	Fluorescent illumination
128	Black case instead of standard grey
*51	Maximum demand indicator. A yellow pointer attached to a metal bracket which slides along a rod behind the scale. The maximum indicator is pushed upscale by the indicating pointer and left at the highest position from where it may be reset manually.

* All instruments intended for billing applications must be provided with "036 door lock".

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NOTE: When instrument is equipped with a "C75" retransmitting slidewire it also must have "02" input fails fe downscale" and "04 amplifier failsafe downscale".

Description

This is a reissue of circular S-EA.644 of January 7, 1965, to clarify and list the approved items falling in positions (e), (d), (f) and (g) in the type designations.

There is no change in the instrument which differs from the type "6" in that the chart drive, balancing motor and slidewire are mounted on a swing-out unit.

The ink reservoir slides along the pen carriage shaft and the capillary pen pivots above the reservoir, one end dipping into the ink and the other end resting on the chart.

Plug-in range cards provide the various ranges. A switch on the plug-in range card that shifts the zero from LH to centre scale is not permitted.

*C75 Instruments having "C75" in the type designation are provided with a single retransmitting slidewire and power supply in which case the output millivolts will be indicated on an auxiliary nameplate "032".

*036 This code number denotes a door lock for use by the utility to prevent unauthorized access. It will appear on all instruments intended for billing applications, and only instruments bearing this code number may be verified.

*31 This code number indicates that a maximum demand indicator is installed. This indicator is a red pointer attached to a metal bracket which slides along a rod behind the scale. This indicator is pushed upscale by the indicating pointer and left at the highest position from where it may be lowered manually.

Note 1 Following the "6" in position "(e)" denoting the power supply, the model code may include any number of compatible optional features.

Note 2 Instruments with a retransmitting slidewire must be equipped with "02" downscale input failsafe and "04" amplifier failsafe downscale.

Note 3 Code number "C6" denoting 1/2 inch per hour is not approved.

Approval granted to: Leeds & Northrup, Canada, Limited,
61 Industry Street, Toronto 15, Ontario.

W.J.S. Fraser,
Chief, Standards Laboratory,
Standards Branch

K. Cryer,
Chief, Electricity & Gas Division,
Standards Branch

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